

```

10      20      30      40      50      60
CATCATCAAT AATCTACAGT AACTGATGG CAGCGGTCCA ACTGCCAATC ATTTTGGCCA

70      80      90      100     110     120
CGTCATTTAT GACGCAACGA CCGCGAGCGT GCGGTGCTGA CGTAACTGTG GGGCGGAGCG

130     140     150     160     170     180
CGTCGGGAG GCGCGGGCGC TGGGCGGGGC TGAGGGCGGC GGGGGCGGCG CGCGGGGGCGG

190     200     210     220     230     240
CGCGGGGGC GGGGCGAGGG GCGGAGTTCC GCACCCGCTA CGTCATTTTC AGACATTTTT

250     260     270     280     290     300
TAGCAAATTT GCGCCTTTTG CAAGCATTTT TCTCACATTT CAGGTATTTA GAGGGCGGAT

310     320     330     340     350     360
TTTTGGTGTT CGTACTTCCG TGTCACATAG TTCACTGTCA ATCTTCATTA CGGCTTAGAC

370     380     390     400     410     420
AAATTTTCGG CGTCCTTTTC GGGTTTATGT CCCCGGTCAC CTTTATGACT GTGTGAAACA

430     440     450     460     470     480
CACCTGCCCA TTGTTTACCC TTGGTCAGTT TTTTCGTCTC CTAGGGTGGG AACATCAAGA

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FIG. 1A

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490      500      510      520      530      540
ACAAATTGC CGAGTAATTG TGCACCTTTT TCCGCGTTAG GACTGCGTTT CACACGTTAG

550      560      570      580      590      600
CAGACTTTT CTCATTTTCT CACACTCCGT CGTCCGCTTC AGAGCTCTGC GTCTTCGCTG

610      620      630      640      650
CCACC ATG AAG TAC CTG GTC CTC GTT CTC AAC GAC GGC ATG AGT CGA ATT GAA
Met Lys Tyr Leu Val Leu Val Leu Asn Asp Gly Met Ser Arg Ile Glu

660      670      680      690      700
AAA GCT CTC CTG TGC AGC GAT GGT GAG GTG GAT TTA GAG TGT CAT GAG GTA
Lys Ala Leu Leu Cys Ser Asp Gly Glu Val Asp Leu Glu Cys His Glu Val

710      720      730      740      750
CTT CCC CCT TCT CCC GCG CCT GTC CCC GCT TCT GTG TCA CCC GTG AGG AGT
Leu Pro Pro Ser Pro Ala Pro Val Pro Ala Ser Val Ser Pro Val Arg Ser

760      770      780      790      800
CCT CCT CCT CTG TCT CCG GTG TTT CCT CCG TCT CCG CCA GCC CCG CTT GTG
Pro Pro Pro Leu Ser Pro Val Phe Pro Pro Ser Pro Pro Ala Pro Leu Val

810      820      830      840      850
AAT CCA GAG GCG AGT TCG CTG CTG CAG CAG TAT CCG AGA GAG CTG TTA GAG
Asn Pro Glu Ala Ser Ser Leu Leu Gln Gln Tyr Arg Arg Glu Leu Leu Glu

```

FIG. 1B

860	870	880	890	900
AGG AGC CTG CTC CGA ACG GCC GAA GGT CAG CAG CGT GCA GTG TGT CCA TGT				
Arg Ser Leu Leu Arg Thr Ala Glu Gly Gln Gln Arg Ala Val Cys Pro Cys				
910	920	930	940	950
GAG CGG TTG CCC GTG GAA GAG GAT GAG TGT CTG AAT GCC GTA AAT TTG CTG				
Glu Arg Leu Pro Val Glu Glu Asp Glu Cys Leu Asn Ala Val Asn Leu Leu				
960	970	980	990	1000
TTT CCT GAT CCC TGG CTA AAT GCA GCT GAA AAT GGG GGT GAT ATT TTT AAG				
Phe Pro Asp Pro Trp Leu Asn Ala Ala Glu Asn Gly Gly Asp Ile Phe Lys				
1020	1030	1040	1050	1060
TCT CCG GCT ATG TCT CCA GAA CCG TGG ATA GAT TTG TCT AGC TAC GAT AGC				
Ser Pro Ala Met Ser Pro Glu Pro Trp Ile Asp Leu Ser Ser Tyr Asp Ser				
1070	1080	1090	1100	1110
GAT GTA GAA GAG GTG ACT AGT CAC TTT TTT CTG GAT TGC CCT GAA GAC CCC				
Asp Val Glu Glu Val Thr Ser Ser His Phe Phe Leu Asp Cys Pro Glu Asp Pro				
1120	1130	1140	1150	1160
AGT CCG GAG TGT TCA TCT TGT GGG TTT CAT CAG GCT CAA AGC GGA ATT CCA				
Ser Arg Glu Cys Ser Ser Cys Gly Phe His Gln Ala Gln Ser Gly Ile Pro				

FIG. 1C

1170 1180 1190 1200 1210  
 GGC ATT ATG TGC AGT TTG TGC TAC ATG CGC CAA ACC TAC CAT TGC ATC **TAT**  
 Gly Ile Met Cys Ser Leu Cys Tyr Met Arg Gln Thr Tyr His Cys Ile Tyr

1220 1230 1240 1250 1260 1270  
**A**[GTAAG TACATTCTGT AAAAGAACAT CTTCGGTGATT TCTAGGTATT GTTTAGGGAT  
 S

1280 1290 1300 1310 1320 1330  
TAACTGGGTG GAGTGATCTT AATCCGGCAT AACCAAATAC ATGTTTTCAC AG]GT CCA GTT  
 er Pro Val

1340 1350 1360 1370 1380 1390  
 TCT GAA GAG GAA ATG TGAGT CATGTTGACT TTGGCGCGC A AGAGGAAATG TGAGTCATGT  
 Ser Glu Glu Met End

1400 1410 1420 1430 1440 1450  
TGACTTTGGC GCGCCCTACG GTGACTTTAA AGCAATTTGA GGATCACTTT TTTGTTAGTC

1460 1470 1480 1490 1500  
 GCT**TATAA**AGT AGTCACGGAG TCTTC ATG GAT CAC TTA AGC GTT CTT TTG GAT TTG  
 Met Asp His Leu Ser Val Leu Leu Asp Leu

1510 1520 1530 1540 1550  
 AAG CTG CTT CGC TCT ATC GTA GCG GGG GCT TCA AAT CGC ACT GGA GTG TGG  
 Lys Leu Leu Arg Ser Ile Val Ala Gly Ala Ser Asn Arg Thr Gly Val Trp

FIG. ID

1560	1570	1580	1590	1600
AAG AGG CGG CTG TGG CTG GGA CGC CTG ACT CAA CTG GTC CAT GAT ACC TGC				
Lys Arg Arg Leu Trp Leu Gly Arg Leu Thr Gln Leu Val His Asp Thr Cys				
1610	1620	1630	1640	1650
GTA GAG AAC GAG AGC ATA TTT CTC AAT TCT CTG CCA GGG AAT GAA GCT TTT				
Val Glu Asn Glu Ser Ile Phe Leu Asn Ser Leu Pro Gly Asn Glu Ala Phe				
1660	1670	1680	1690	1700
TTA AGG TTG CTT CGG AGC GGC TAT TTT GAA GTG TTT GAC GTG TTT GTG GTG				
Leu Arg Leu Leu Arg Ser Gly Tyr Phe Glu Val Phe Asp Val Phe Val Val				
1710	1720	1730	1740	1750
CCT GAG CTG CAT CTG GAC ACT CCG GGT CGA GTG GTC GCC GCT CTT GCT CTG				
Pro Glu Leu His Leu Asp Thr Pro Gly Arg Val Val Ala Ala Leu Ala Leu				
1770	1780	1790	1800	1810
CTG GTG TTC ATC CTC AAC GAT TTA GAC GCT AAT TCT GCT TCT TCA GGC TTT				
Leu Val Phe Ile Leu Asn Asp Leu Asp Ala Asn Ser Ala Ser Ser Gly Phe				
1820	1830	1840	1850	1860
GAT TCA GGT TTT CTC GTG GAC CGT CTC TGC GTG CCG CTA TGG CTG AAG GCC				
Asp Ser Gly Phe Leu Val Asp Arg Leu Cys Val Pro Leu Trp Leu Lys Ala				
				Met Ala Glu Gly

FIG. 1E

1870	1880	1890	1900	1910
AGG GCG TTC AAG ATC ACC CAG AGC TCC AGG AGC ACT TCG CAG CCT TCC TCG				
Arg Ala Phe Lys Ile Thr Gln Ser Ser Arg Ser Thr Ser Gln Pro Ser Ser				
Gln Gly Val Gln Asp His Pro Glu Leu Gln Glu His Phe Ala Ala Phe Leu				
1920	1930	1940	1950	1960
TCG CCC GAC AAG ACG ACC CAG ACT ACC AGC CAG TA GAC GGG GAC AGC CCA				
Ser Pro Asp Lys Thr Thr Gln Thr Thr Ser Gln End				
Val Ala Arg Gln Asp Asp Pro Asp Tyr Gln Pro Val Asp Gly Asp Ser Pro				
1970	1980	1990	2000	2010
CCC CGG GCT AGC CTG GAG GAG GCT GAA CAG AGC AGC ACT CGT TTC GAG CAC				
Pro Arg Ala Ser Leu Glu Glu Ala Glu Gln Ser Ser Thr Arg Phe Glu His				
2020	2030	2040	2050	2060
ATC AGT TAC CGA GAC GTG GTG GAT GAC TTC AAT AGA TGC CAT GAT GTT TTT				
Ile Ser Tyr Arg Asp Val Val Asp Asp Phe Asn Arg Cys His Asp Val Phe				
2070	2080	2090	2100	2110
TAT GAG AGG TAC AGT TTT GAG GAC ATA AAG AGC TAC GAG GCT TTG CCT GAG				
Tyr Glu Arg Tyr Ser Phe Glu Asp Ile Lys Ser Tyr Glu Ala Leu Pro Glu				

FIG. 1F

2120	2130	2140	2150	2160
GAC AAT TTG GAG CAG CTC ATA GCT ATG CAT GCT AAA ATC AAG CTG CTG CCC				
Asp Asn Leu Glu Gln Leu Ile Ala Met His Ala Lys Ile Lys Leu Leu Pro				
2170	2180	2190	2200	2210
GGT CGG GAG TAT GAG TTG ACT CAA CCT TTG AAC ATA ACA TCT TGC GCC TAT				
Gly Arg Glu Tyr Glu Leu Thr Gln Pro Leu Asn Ile Thr Ser Cys Ala Tyr				
2220	2230	2240	2250	2260
GTG CTC GGA AAT GGG GCT ACT ATT AGG GTA ACA GGG GAA GCC TCC CCG GCT				
Val Leu Gly Asn Gly Ala Thr Ile Arg Val Thr Gly Glu Ala Ser Pro Ala				
2270	2280	2290	2300	2310
ATT AGA GTG GGG GCC ATG ATG GCC GTG GGT CCG TGT GTA ACA GGA ATG ACT GGG				
Ile Arg Val Gly Ala Met Ala Val Gly Pro Cys Val Thr Gly Met Thr Gly				
2330	2340	2350	2360	2370
GTG ACT TTT GTG AAT TGT AGG TTT GAG AGA GAG TCA ACA ATT AGG GGG TCC				
Val Thr Phe Val Asn Cys Arg Phe Glu Arg Glu Ser Thr Ile Arg Gly Ser				
2380	2390	2400	2410	2420
CTG ATA CGA GCT TCA ACT CAC GTG CTG TTT CAT GGC TGT TAT TTT ATG GGA				
Leu Ile Arg Ala Ser Thr His Val Leu Phe His Gly Cys Tyr Phe Met Gly				

FIG. 1G

2430	2440	2450	2460	2470
ATT ATG GGC ACT TGT ATT GAG GTG GCG GGA GCT TAC ATT CGG GGT TGT				
Ile Met Gly Thr Cys Ile Glu Val Gly Ala Gly Ala Tyr Ile Arg Gly Cys				
2480	2490	2500	2510	2520
GAG TTT GTG GGC TGT TAC CGG GGA ATC TGT TCT ACT TCT AAC AGA GAT ATT				
Glu Phe Val Gly Cys Tyr Arg Gly Ile Cys Ser Thr Ser Asn Arg Asp Ile				
2530	2540	2550	2560	2570
AAG GTG AGG CAG TGC AAC TTT GAC AAA TGC TTA CTG GGT ATT ACT TGT AAG				
Lys Val Arg Gln Cys Asn Phe Asp Lys Cys Leu Leu Gly Ile Thr Cys Lys				
2580	2590	2600	2610	2620
GGG GAC TAT CGT CTT TCG GGA AAT GTG TGT TCT GAG ACT TTC TGC TTT GCT				
Gly Asp Tyr Arg Leu Ser Gly Asn Val Cys Ser Glu Thr Phe Cys Phe Ala				
2630	2640	2650	2660	2670
CAT TTA GAG GGA GAG GGT TTG GTT AAA AAC ACA GTC AAG TCC CCT AGT				
His Leu Glu Gly Glu Gly Leu Val Lys Asn Asn Thr Val Lys Ser Pro Ser				
2680	2690	2700	2710	2720
CGC TGG ACC AGC GAG TCT GGC TTT TCC ATG ATA ACT TGT GCA GAC GGC AGG				
Arg Trp Thr Ser Glu Ser Gly Phe Ser Met Ile Thr Cys Ala Asp Gly Arg				

FIG. 1H



2730	2740	2750	2760	2770
GTT ACG CCT TTG GGT TCC CTC CAC ATT GTG GGC AAC CGT TGT AGG CGT TGG				
Val Thr Pro Leu Gly Ser Leu His Ile Val Gly Asn Arg Cys Arg Arg Trp				
2780	2790	2800	2810	2820
CCA ACC ATG CAG GGG AAT GTG TTT ATC ATG TCT AAA CTG TAT CTG GGC AAC				
Pro Thr Met Gln Gly Asn Val Phe Ile Met Ser Lys Leu Tyr Leu Gly Asn				
2830	2840	2850	2860	2870
AGA ATA GGG ACT GTA GCC CTG CCC CAG TGT GCT TTC TAC AAG TCC AGC ATT				
Arg Ile Gly Thr Val Ala Leu Pro Gln Cys Ala Phe Tyr Lys Ser Ser Ile				
2880	2890	2900	2910	2920
TGT TTG GAG GAG AGG GCG ACA AAC AAG CTG GTC TTG GCT TGT GCT TTT GAG				
Cys Leu Glu Glu Arg Ala Thr Asn Lys Leu Val Leu Ala Cys Ala Phe Glu				
2930	2940	2950	2960	2970
AAT AAT GTA CTG GTG TAC AAA GTG CTG AGA CGG GAG AGT CCC TCA ACC GTG				
Asn Asn Val Leu Val Tyr Lys Val Leu Arg Arg Glu Ser Pro Ser Thr Val				
2980	2990	3000	3010	3020
AAA ATG TGT GTT TGT GGG ACT TCT CAT TAT GCA AAG CCT TTG ACA CTG GCA				
Lys Met Cys Val Cys Gly Thr Ser His Tyr Ala Lys Pro Leu Thr Leu Ala				
3030				

FIG. II

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3040      3050      3060      3070      3080
ATT ATT TCT TCA GAT ATT CGG GCT AAT CGA TAC ATG TAC ACT GTG GAC TCA
Ile Ile Ser Ser Asp Ile Arg Ala Asn Arg Tyr Met Tyr Thr Val Asp Ser

3090      3100      3110      3120      3130      3140
ACA GAG TTC ACT TCT GAC GAG GAT T AAAAGTGGC GGGGCCAAGA GGGGTATAAA
Thr Glu Phe Thr Ser Asp Glu Asp End

3150      3160      3170      3180      3190      3200
TAGGTGGGGA GGTGAGGG AGCCGTAGTT TCTGTTTTTC CCAGACTGGG GGGGACAAC ATG
Met

3210      3220      3230      3240      3250
GCC GAG GAA GGG CGC ATT TAT GTG CCT TAT GTA ACT GCC CGC CTG CCC AAG
Ala Glu Glu Gly Arg Ile Tyr Val Pro Tyr Val Thr Ala Arg Leu Pro Lys

3260      3270      3280      3290      3300
TGG TCG GGT TCG GTG CAG GAT AAG ACG GGC TCG AAC ATG TTG GGG GGT GTG
Trp Ser Gly Ser Val Gln Asp Lys Thr Gly Ser Asn Met Leu Gly Gly Val

3310      3320      3330      3340      3350
GTA CTC CCT CCT AAT TCA CAG GCG CAC CGG ACG GAG ACC GTG GGC ACT GAG
Val Leu Pro Pro Asn Ser Gln Ala His Arg Thr Glu Thr Val Gly Thr Glu

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FIG. 1J

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3360      3370      3380      3390      3400
GCC ACC AGA GAC AAC CTG CAC GCC GAG GGA GCG CGT CGT CCT GAG GAT CAG
Ala Thr Arg Asp Asn Leu His Ala Glu Gly Ala Arg Arg Pro Glu Asp Gln

3410      3420      3430      3440      3450
ACG CCC TAC ATG ATC TTG GTG GAG GAC TCT CTG GGA GGT TTG AAG AGG CGA
Thr Pro Tyr Met Ile Leu Val Glu Asp Ser Leu Gly Leu Lys Arg Arg

3460      3470      3480      3490      3500
ATG GAC TTG CTG GAA GAA TCT AAT CAG CAG CTG CTG GCA ACT CTC AAC CGT
Met Asp Leu Leu Glu Glu Ser Asn Gln Gln Leu Leu Ala Thr Leu Asn Arg

3510      3520      3530      3540      3550
CTC CGT ACA GGA CTC GCT GCC TAT GTG CAG GCT AAC CTT GTG GGC GGC CAA
Leu Arg Thr Gly Leu Ala Ala Tyr Val Gln Ala Asn Leu Val Gly Gly Gln

3560      3570      3580      3590      3600      3610
GTT AAC CCC TTT GTT TAAATA AAAATACACT CATACAGTTT ATTATGCTGT
Val Asn Pro Phe Val End

3620      3630      3640      3650      3660      3670
CAATAAAATT CTTTATTTT CCTGTGATAA TACCGTGTC AGCGTGCTCT GTCAAATAAGG

3680      3690      3700      3710      3720      3730
GTCCTATGCA TCCTGAGAAG GGCCTCATAT ACCCATGGCA TGAATATTAA GATACATGGG

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FIG. 1K

```
3740          3750          3760          3770          3780          3790
CATAAGGCC TCAGAAGGT TGAGGTAGAG CCACTGCAGA CTTTCGTGG GAGGTAAGGT

3800          3810          3820          3830          3840          3850
GTTGTAATA ATCCAGTCAT ACTGACTGTG CTGGGCGTGG AAGGAAAAGA TGTCCTTTAG

3860          3870          3880          3890          3900          3910
AAGAAAGGTG ATGGCAAAG GGAGGCTCTT AGTGTAGGTA TTGATAAATC TGTTCAAGTTG

3920          3930          3940          3950          3960          3970
GGAGGGATGC ATTCGGGGGC TAATAAGGTG GAGTTAGCC TGAATCTTAA GGTTGGCAAT

3980          3990          4000          4010          4020          4030
GTTGCCCCCT AGGTCTTTGC GAGGATTTCAT GTTGTGCAGT ACCACAAAAA CAGAGTAGCC

4040          4050          4060
TGTCATTG GGAATTAT CATGAAGCT T
```

FIG. 1L

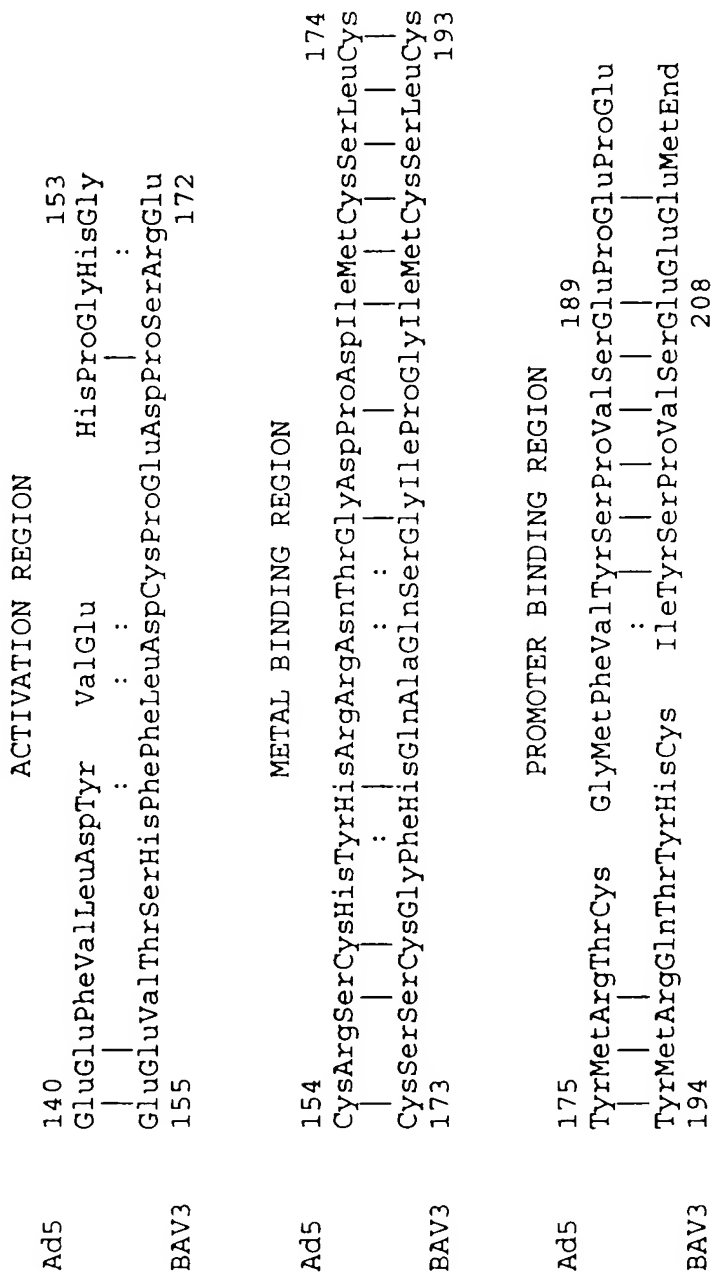


FIG. 2A

FIG. 2B

FIG. 3A

**FIG. 3B**

Ad5 150 GlnLysTyrSerIleGluGlnLeuThrThrTyrTrpLeuGlnProGlyAspAspPheGlu  
 : | | | : : | | |  
 BAV3 74 GluArgLysSerPheGluAspIleLysSerTyrGluAlaLeuProGluAspAsnLeuGlu  
 170 GluAlaIleArgValTyrAlaLysValAlaLeuArgProAspCysLysTyrLysIleSer  
 | : | | : | | : :  
 94 GlnLeuIleAlaMetHisAlaLysIleLysLeuLeuProGlyArgGluLysGluLeuThr  
 190 LysLeuValAsnIleArgAsnCysCysTyrIleSerGlyAsnGlyAlaGluValGluIle  
 : | | | : | | | : :  
 114 GlnProLeuAsnIleThrSerCysAlaTyrValLeuGlyAsnGlyAlaThrIleArgVal  
 210 AspThrGluAspArgValAlaPheArgCysSerMetIleAsnMetTrpProGlyValLeu  
 | | | : : | |  
 134 ThrGlyGluAlaSerProAlaIleArgValGlyAlaMetAlaValGlyProCysValThr  
 230 GlyMetAspGlyValValIleMetAsnValArgPheThr GlyProAsnPheSerGly  
 | | | : | | |  
 154 GlyMetThrGlyValThrPheValAsnCysArgPheGluArgGluSerThrIleArgGly  
 249 ThrValPheLeuAlaAsnThrAsnLeuIleLeuHisGlyValSerPheTyr GlyPhe  
 : : | | : : | | : : |  
 174 SerLeuIleArgAlaSerThrHisValLeuPheHisGlyCys TyrPheMetGlyIle  
 268 AsnAsnThrCysValGluAlaTrpThrAspValArgValArgGlyCysAlaPheTyrCys  
 | | : |  
 193 MetGlyThrCysIleGluValGlyAlaGlyAlaTyrIleArgGlyCysGluPheValGly  
 288 CysTrpLysGlyValValCysArgProLysSerArgAla SerIleLysLysCysLeu  
 | : : | : | : : |  
 213 CysTyrArgGlyIle CysSerThrSerAsnArgAspIleLysValArgGlnCysAsn  
 307 PheGluArgCysThrLeuGlyIleLeuSerGluGlyAsnSerArgValArgHisAsnVal  
 | : : | | | | : | |  
 232 PheAspLysCysLeuLeuGlyIleThrCysLysGlyAspTyrArgLeuSerGlyAsnVal  
 327 AlaSerAspCysGlyCysPheMetLeuValLysSerValAlaValIleLysHisAsnMet  
 | : | | : : | |  
 252 CysSerGluThrPheCysPheAlaHisLeuGluGlyGluGlyLeuValLysAsnAsnThr

FIG. 4A

347 Val CysGlyAsn CysGluAspArgAlaSerGlnMetLeuThrCysSerAsp  
 | : | | : |  
 272 ValLysSerProSerArgIrpThrSerGluSerGlyPheSerMetIleThrCysAlaAsp  
 364 GlyAsnCysHisLeuLeuLysThrIleHisVal AlaSerHisSerArgLysAlaTrp  
 | : : | : : | : |  
 292 GlyArgValThrProLeuGlySerLeuHisIleValGlyAsnArgCysArgArg Trp  
 383 ProValPheGluHisAsnIleLeuHisArgCysSerLeuHisLeuGlyAsnArgArgGly  
 | : | | | | | |  
 311 ProThrMetGlnGlyAsnValPheIleMetSerLysLeuTyrLeuGlyAsnArgIleGly  
 403 ValPheLeuProTyrGlnCysAsnLeuSerHisThrLysIleLeuLeuGluProGlu  
 | | | | : : | |  
 331 ThrValAlaLeuPro GlnCysAlaPheTyrLysSerSerIleCysLeuGluGluArg  
 422 SerMetSerLysValAsnLeuAsnGlyValPheAspMetThrMetLysIleTrpLysVal  
 : | : | : : : : | |  
 350 AlaThrAsnLysLeuValLeuAlaCysAlaPheGluAsnAsnValLeuValTyrLysVal  
 442 LeuArgTyrAspGluThrArgThrArgCysArgProCysGluCysGlyGlyLysHisIle  
 | | : | : | | | |  
 370 LeuArgArgGluSerProSerThr ValLysMetCysValCysGlyThrSerHisTyr  
 462 ArgAsnGlnProValMetLeuAspVal ThrGluGluLeuArgProAspHisLeuVal  
 | : | : : : | : :  
 389 AlaLysProLeuThrLeuAlaIleIleSerSerAspIleArgAlaAsnArgTyrMet  
 481 LeuAlaCysHisArgAlaGluPheGlySerSerAspGluAspThrAspEnd  
 : : | | : | | | |  
 408 TyrThrValAspSerThrGluPhe ThrSerAspGluAspEnd

FIG. 4B



Ad5	1	MetSerThrAsnSerPheAspGlySerIleValSerSerTyrLeuThrThrArgMetPro
		:
BAV3	1	MetAla Glu GluGlyArgIleTyrValProTyrValThrAlaArgLeuPro
		:
	21	ProTrpAlaGlyValArgGlnAsnValMetGlySerSerIleAspGlyArgProValLeu
		:
	18	LysTrpSerGlySerValGlnAspLysThrGlySerAsnMetLeuGlyValValLeu
		:
	41	ProAlaAsnSerThrThrLeuThrTyrGluThrValSerGlyThrProLeuGluThrAla
		:
	38	ProProAsnSerGlnAlaHisArgThrGluThrVal GlyThrGlu AlaThr
		:
	61	AlaSerAlaAlaAlaSerAlaAlaAlaThrAlaArgGlyIleValThrAspPheAla
		:
	55	ArgAspAsnLeuHisAlaGluGlyAlaArg ArgProGluAspGlnThr Pro
		:
	81	PheLeuSerProLeuAlaSerSerAlaAlaSerArgSerSerAlaArgAspLysLeu
		:
	72	TyrMetIle LeuValGluAspSerLeuGlyGlyLeuLysArgArgMetAspLeuLeu
		:
	101	ThrAlaLeuLeuAlaGlnLeu AspSerLeuThrArgGluLeuAsnValValSerGln
		:
	91	GluGluSerAsnGlnGlnLeuLeuAlaThrLeuAsnArg LeuArgThr Gly
		:
	120	GlnLeuLeuAspLeuArgGlnGlnValSerAlaLeuLysAlaSerSerProProAsnAla
		:
	108	LeuAlaAlaTyr ValGln AlaAsnLeuValGlyGlyGlnValAsnProphe
		:
	140	ValEnd
	125	ValEnd

FIG. 5

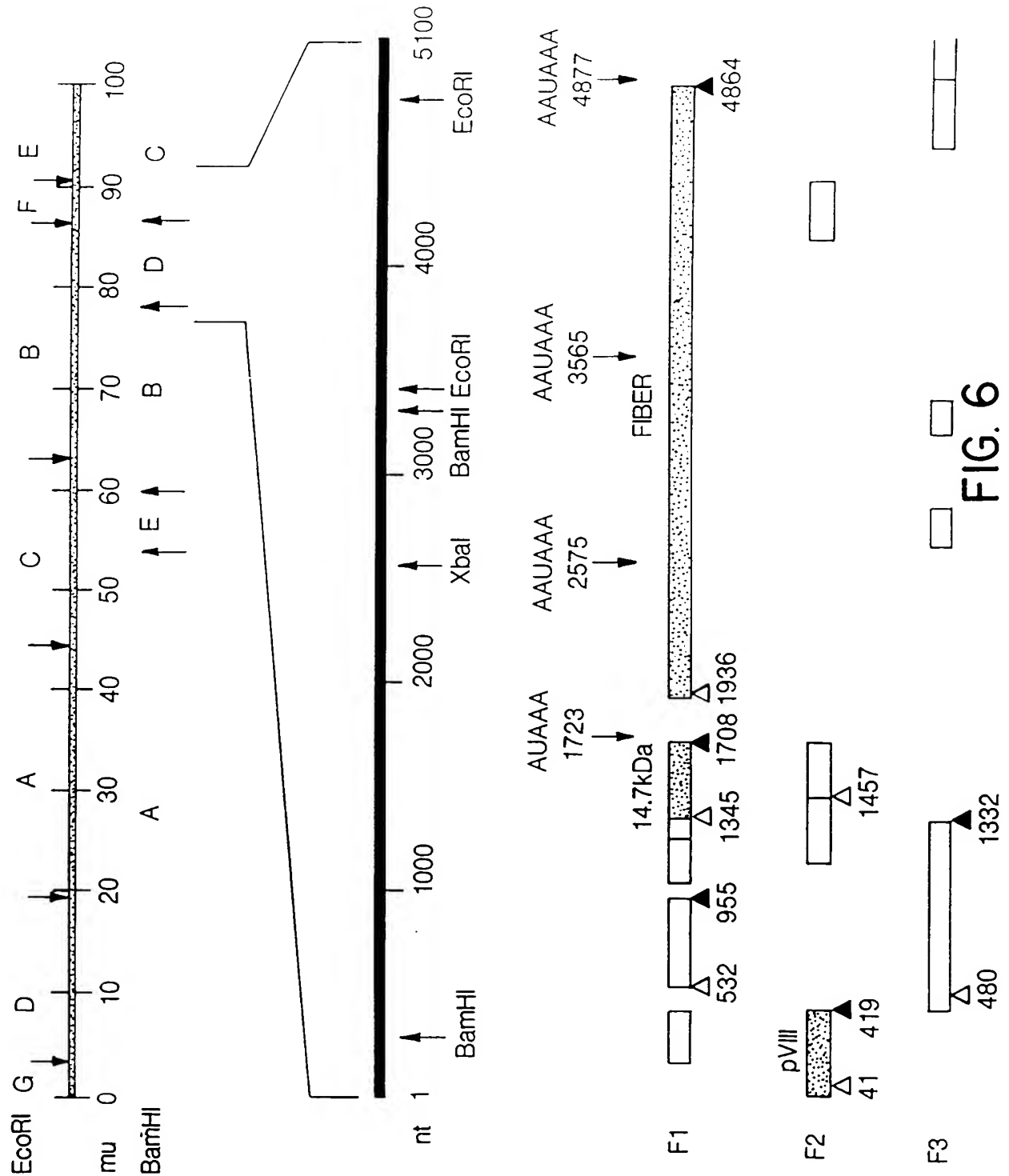


FIG. 6

ORF 1

10	20	30	40	50
C CTC ATC AAA CAA CCC GTG GTG GGC ACC ACC CAC GTG GAA ATG CCT CGC AAC				
Leu Ile Lys Gln Pro Val Val Gly Thr Thr His Val Glu <b>Met</b> Pro Arg Asn				

60	70	80	90	100
GAA GTC CTA GAA CAA CAT CTG ACC TCA CAT GGC GCT CAA ATC GCG GGC GGA				
Glu Val Leu Glu Gln His Leu Thr Ser His Gly Ala Gln Ile Ala Gly Gly				

110	120	130	140	150
GGC GCT GCG GGC GAT TAC TTT AAA AGC CCC ACT TCA GCT CGA ACC CTT ATC				
Gly Ala Ala Gly Asp Tyr Phe Lys Ser Pro Thr Ser Ala Arg Thr Leu Ile				

160	170	180	190	200
CCG CTC ACC GCC TCC TGC TTA AGA CCA GAT GGA GTC TTT CAA CTA GGA GGA				
Pro Leu Thr Ala Ser Cys Leu Arg Pro Asp Gly Val Phe Gln Leu Gly Gly				

210	220	230	240	250
GGC TCG CGT TCA TCT TTC AAC CCC CTG CAA ACA GAT TTT GCC TTC CAC GCC				
Gly Ser Arg Ser Ser Phe Asn Pro Leu Gln Thr Asp Phe Ala Phe His Ala				

260	270	280	290	300
CTG CCC TCC AGA CCG CGC CAC GGG GGC ATA GGA TCC AGG CAG TTT GTA GAG				
Leu Pro Ser Arg Pro Arg His Gly Gly Ile Gly Ser Arg Gln Phe Val Glu				

FIG. 7A

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310          320          330          340          350
GAA TTT GTG CCC GCC GTC TAC CTC AAC CCC TAC TCG GGA CCG CCG GAC TCT
Glu Phe Val Pro Ala Val Tyr Leu Asn Pro Tyr Ser Gly Pro Pro Asp Ser

360          370          380          390          400
TAT CCG GAC CAG TTT ATA CGC CAC TAC AAC GTG TAC AGC AAC TCT GTG AGC
Tyr Pro Asp Gln Phe Ile Arg His Tyr Asn Val Tyr Ser Asn Ser Val Ser
ORF 2 Ala
410          420          430          440          450          460
GGT TAT AGC T GAG ATT GTA AGA CTC TCC TAT CTG TCT CTG TGC TGC TTT TCC
Gly Tyr Ser
Val Ile Ala Glu Ile Val Arg Leu Ser Tyr Leu Ser Leu Cys Cys Phe Ser

470          480          490          500          510
GCT TCA AGC CCC ACA AGC ATG AAG GGG TTT CTG CTC ATC TTC AGC CTG CTT
Ala Ser Ser Pro Thr Ser Met Lys Gly Phe Leu Leu Ile Phe Ser Leu Leu

520          530          540          550          560
GTG CAT TGT CCC CTA ATT CAT GTT GGG ACC ATT AGC TTC TAT GCT GCA AGG
ORF 3 Phe Met Leu Gly Pro Leu Ala Ser Met Leu Gln Gly
Val His Cys Pro Leu Ile His Val Gly Thr Ile Ser Phe Tyr Ala Ala Arg

```

FIG. 7B

570 580 590 600 610  
 CCC GGG TCT GAG CCT AAC GCG ACT TAT GTT TGT GAC TAT GGA AGC GAG TCA  
 Pro Gly Leu Ser Leu Thr Arg Leu Met Phe Val Thr Met Glu Ala Ser Gln  
 Pro Gly Ser Glu Pro Asn Ala Thr Tyr Val Cys Asp Tyr Gly Ser Glu Ser

620 630 640 650 660  
 GAT TAC AAC CCC ACC ACG GTT CTG TGG TTG GCT CGA GAG ACC GAT GGC TCC  
 Ile Thr Thr Pro Pro Arg Phe Cys Gly Trp Leu Glu Arg Pro Met Ala Pro  
 Asp Tyr Asn Pro Thr Thr Val Leu Trp Leu Ala Arg Glu Thr Asp Gly Ser

670 680 690 700 710  
 TGG ATC TCT GTT TTC CGT CAC AAC GGC TCC TCA ACT GCA GCC CCC GGG  
 Gly Ser Leu Phe Phe Ser Val Thr Thr Ala Pro Gln Leu Gln Pro Pro Gly  
 Trp Ile Ser Val Leu Phe Arg His Asn Gly Ser Ser Thr Ala Ala Pro Gly

720 730 740 750 760  
 GTC GTC GCG CAC TTT ACT GAC CAC AAC AGC AGC ATT GTG GTG CCC CAG TAT  
 Ser Ser Arg Thr Leu Leu Thr Thr Thr Ala Ala Leu Trp Cys Pro Ser Ile  
 Val Val Ala His Phe Thr Asp His Asn Ser Ser Ile Val Val Pro Gln Tyr

770 780 790 800 810  
 TAC CTC CTC AAC AAC TCA CTC TCT AAG CTC TGC TGC TCA TAC CGG CAC AAC  
 Thr Ser Ser Thr Thr His Ser Leu Ser Ser Ala Ala His Thr Gly Thr Thr  
 Tyr Leu Leu Asn Asn Ser Leu Ser Lys Leu Cys Cys Ser Tyr Arg His Asn

FIG. 7C

820 830 840 850 860  
GAG CGT TCT CAG TTT ACC TGC AAA CAA GCT GAC GTC CCT ACC TGT CAC GAG  
Ser Val Leu Ser Leu Pro Ala Asn Lys Leu Thr Ser Leu Pro Val Thr Ser  
Glu Arg Ser Gln Phe Thr Cys Lys Lys Gln Ala Asp Val Pro Thr Cys His Glu

870 880 890 900 910 920  
CCC GGC AAG CCG CTC ACC CTC CGC GTC TCC CCC GCG CTG GGA ACT GCC CAC  
Pro Ala Ser Arg Ser Pro Ser Ala Ser Pro Pro Arg Trp Glu Leu Pro Thr  
Pro Gly Lys Pro Leu Thr Leu Arg Val Ser Pro Ala Leu Gly Thr Ala His

930 940 950 960 970  
CAA GCA GTC ACT TGG TTT TTT CAA AAT GTA CCC ATA GCT ACT GTT TAC CGA  
Lys Gln Ser Leu Gly Phe Phe Lys Met Tyr Pro  
Gln Ala Val Thr Trp Phe Phe Gln Asn Val Pro Ile Ala Thr Val Tyr Arg

980 990 1000 1010 1020  
CCT TGG GGC AAT GTA ACT TGG TTT TGT CCT CCC TTC ATG TGT ACC TTT AAT  
Pro Trp Gly Asn Val Thr Trp Phe Cys Pro Pro Phe Met Cys Thr Phe Asn

1030 1040 1050 1060 1070  
GTC AGC CTG AAC TCC CTA CTT ATT TAC AAC TTT TCT GAC AAA ACC GGG GGG  
Val Ser Leu Asn Ser Leu Leu Ile Tyr Asn Phe Ser Asp Lys Thr Gly Gly

FIG. 7D

1080	1090	1100	1110	1120
CAA TAC ACA GCT CTC ATG CAC TCC GGA CCT GCT TCC CTC TTT CAG CTC TTT				
Gln Tyr Thr Ala Leu Met His Ser Gly Pro Ala Ser Leu Phe Gln Leu Phe				
1130	1140	1150	1160	1170
AAG CCA ACG ACT TGT GTC ACC AAG GTG GAG GAC CCG CCG TAT GCC AAC GAC				
Lys Pro Thr Thr Cys Val Thr Lys Val Glu Asp Pro Pro Tyr Ala Asn Asp				
1180	1190	1200	1210	1220
CCG GCC TCG CCT GTG TGG CGC CCA CTG CTT TTT GCC TTC GTC CTC TGC ACC				
Pro Ala Ser Pro Val Trp Arg Pro Leu Leu Phe Ala Phe Val Leu Cys Thr				
1230	1240	1250	1260	1270
GGC TGC GCG GTG TTG TTA ACC GCC TTC GGT CCA TCG ATT CTA TCC GGT ACC				
Gly Cys Ala Val Leu Leu Thr Ala Phe Gly Pro Ser Ile Leu Ser Gly Thr				
ORF 4 Pro Pro Ser Val His Arg Phe Tyr Pro Val Pro				
1280	1290	1300	1310	1320
CGA AAG CTT ATC TCA GCC CGC TTT TGG AGT CCC GAG CCC TAT ACC ACC CTC				
Glu Ser Leu Ser Gln Pro Ala Phe Gly Val Pro Ser Pro Ile Pro Pro Ser				
Arg Lys Leu Ile Ser Ala Arg Phe Trp Ser Pro Glu Pro Tyr Thr Thr Leu				

FIG. 7E

1330 1340 1350 1360 1370 1380  
 CAC T AAC AGT CCC CCC ATG GAG CCA GAC GGA GTT CAT GCC GAG CAG CAG TTT  
 Thr Asn Ser Pro Pro **Met** Glu Pro Asp Gly Val His Ala Glu Gln Gln Phe  
 His

1390 1400 1410 1420 1430  
 ATC CTC AAT CAG ATT TCC TGC GCC AAC ACT GCC CTC CAG CGT CAA AGG GAG  
 Ile Leu Asn Gln Ile Ser Cys Ala Asn Thr Ala Leu Gln Arg Gln Arg Glu

1440 1450 1460 1470 1480  
 GAA CTA GCT TCC CTT GTC ATG TTG CAT GCC TGT AAG CGT GGC CTC TTT TGT  
 Glu Leu Ala Ser Leu Val Met Leu His Ala Cys Lys Arg Gly Leu Phe Cys

ORF 5 Leu Pro Leu Ser Cys Cys **Met** Pro Val Ser Val Ala Ser Phe Val

1490 1500 1510 1520 1530  
 CCA GTC AAA ACT TAC AAG CTC AGC CTC AAC GCC TCG GCC AGC GAG CAC AGC  
 Pro Val Lys Thr Tyr Lys Leu Ser Leu Asn Ala Ser Ala Ser Glu His Ser  
 Gln Ser Lys Leu Thr Ser Ser Ala Ser Thr Pro Arg Pro Ala Ser Thr Ala

1540 1550 1560 1570 1580  
 CTG CAC TTT GAA AAA AGT CCC TCC CGA TTC ACC CTG GTC AAC ACT CAC GCC  
 Leu His Phe Glu Lys Ser Pro Ser Arg Phe Thr Leu Val Asn Thr His Ala  
 Cys Thr Leu Lys Lys Val Pro Pro Asp Ser Pro Trp Ser Thr Leu Thr Pro

FIG. 7F



```

1590      1600      1610      1620      1630
GGA GCT TCT GTG CGA GTG GCC CTA CAC CAC GAG GGA GCT TCC GGC AGC ATC
Gly Ala Ser Val Arg Val Ala Leu His His Gln Gly Ala Ser Gly Ser Ile
Glu Leu Leu Cys Glu Trp Pro Tyr Thr Thr Arg Glu Leu Pro Ala Ala Ser

1640      1650      1660      1670      1680
CGC TGT TCC TCC CAC GGC GAG TGC CTC CCC GTC CTC CTC AAG ACC CTC
Arg Cys Ser Cys Ser His Ala Glu Cys Leu Pro Val Leu Leu Lys Thr Leu
Ala Val Pro Val Pro Thr Pro Ser Ala Ser Pro Ser Ser Arg Pro Ser

1690      1700      1710      1720      1730      1740
TGT GCC TTT AAC TTT TTA GAT TAG CTGAAAGCAA ATATAAAATG GTGTGCTTAC
Cys Ala Phe Asn Phe Leu Asp
Val Pro Leu Thr Phe

1750      1760      1770      1780      1790
CGTAATTCTG TTTTGACTTG TGTGCTTGA TTT CTC CCC CTG CGC CGT AAT CCA GTG

1800      1810      1820      1830      1840
CCC CTC TTC AAA ACT CTC GTA CCC TAT GCG ATT CGC ATA GGC ATA TTT TCT

1850      1860      1870      1880      1890
AAA AGC TCT GAA GTC AAC ATC ACT CTC AAA CAC TTC TCC GTT GTA GGT TAC

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FIG. 7G

**FIG. 7H**

2210	2220	2230	2240	2250
GGC AAC GTC ACG CTC AAC ATG TCT GAC GGG CTA TAT ACT AAG GAC AAC AAG				
Gly <u>Asn Val Thr Leu</u> <u>Asn Met Ser Asp Gly Leu Tyr Thr Lys Asp Asn Lys</u>				
2260	2270	2280	2290	2300
CTA GCT GTC AAA GTA GGT CCC GGG CTG TCC CTC GAC TCC AAT AAT GCT CTC				
Leu Ala Val Lys Val Gly Pro Gly Leu Ser Leu Asp Ser Asn Asn Ala Leu				
2310	2320	2330	2340	2350
CAG GTC CAC ACA GGC GAC GGC CTC ACC GGT GAT ACC GAT GAC AAG GTG TCT CTA				
Gln Val His Thr Gly Asp Gly Leu Thr Val Thr Asp Asp Lys Val Ser Leu				
2360	2370	2380	2390	2400
AAT ACC CAA GCT CCC CTC TCG ACC ACC AGC GCG GGC CTC TCC CTA CTT CTG				
Asn Thr Gln Ala Pro Leu Ser Thr Thr Ser Ala Gly Leu Ser Leu Leu Leu				
2410	2420	2430	2440	2450
GGT CCC AGC CTC CAC TTA GGT GAG GAG GAA CGA CTA ACA GTA AAC ACC GGA				
Gly Pro Ser Leu His Leu Gly Glu Glu Arg Leu Thr Val Asn Thr Gly				
2460				
2470	2480	2490	2500	2510
GCG GGC CTC CAA ATT AGC AAT AAC GCT CTG GCC GTA AAA GTA GGT TCA GGT				
Ala Gly Leu Gln Ile Ser Asn Asn Ala Leu Ala Val Lys Val Gly Ser Gly				

FIG. 7I

2520	ATC ACC GTA	2530	GAT GCT CAA AAC	2540	CAG CTC GCT GCA	2550	TCC CTG GGG	2560	GAC GGT CTA
	Ile Thr Val		Asp Ala Gln Asn		Gln Leu Ala Ala		Ser Leu Gly		Asp Gly Leu
2570	GAA AGC AGA	2580	GAT AAT AAA	2590	ACT GTC GTT AAG	2600	GCT GGG CCC	2610	GGA CTT ACA ATA
	Glu Ser Arg		Asp Asn Lys Thr		Val Val Lys Ala		Gly Pro Gly		Leu Thr Ile
2620	ACT AAT CAA	2630	GCT CTT ACT	2640	GTT GCT ACC	2650	GGG AAC GGC	2660	CTT CAG GTC AAC CCG
	Thr Asn Gln		Ala Leu Thr Val		Ala Thr Gly Asn		Gly Leu Gln		Val Asn Pro
2670	GAA GGG CAA	2680	CTG CAG CTA	2690	AAC ATT ACT	2700	GCC GGT CAG	2710	GGC CTC AAC TTT GCA
	Glu Gly Gln		Leu Leu Gln Leu		Asn Ile Thr Ala		Gly Gln Gly		Leu Asn Phe Ala
2720	AAC AAC AGC	2730	CTC GCC GTG	2740	GAG CTG GGC	2750	TCG GGC CTG	2760	CAT TTT CCC CCT GGC
	Asn Asn Ser		Leu Ala Val Glu		Leu Gly Ser Gly		Leu His Phe		Pro Pro Gly
2770	CAA AAC CAA	2780	GTA AGC CTT	2790	TAT CCC GGA	2800	GAT GGA ATA	2810	GAC ATC CGA GAT AAT
	Gln Asn Gln		Val Ser Leu Tyr		Pro Gly Asp Gly		Ile Asp Ile		Arg Asp Asn

FIG. 7J

2820	2830	2840	2850	2860
AGG GTG ACT GTG CCC GCT GGT GGC CCA GGC CTG AGA ATG CTC AAC CAC CAA CTT				
Arg Val Thr Val Pro Ala Gly Pro Gly Leu Arg Met Leu Asn His Gln Leu				
2870	2880	2890	2900	2910
GCC GTA GCT TCC GGA GAC GGT TTA GAA GTC CAC AGC GAC ACC CTC CGG TTA				
Ala Val Ala Ser Gly Asp Gly Leu Glu Val His Ser Asp Thr Leu Arg Leu				
2920	2930	2940	2950	2960
AAG CTC TCC CAC GGC CTG ACA TTT GAA AAT GGC GCC GTA CGA GCA AAA CTA				
Lys Leu Ser His Gly Leu Thr Phe Glu Asn Gly Ala Val Arg Ala Lys Leu				
2980	2990	3000	3010	3020
GGA CCA GGA CTT GGC ACA GAC GAC TCT GGT CGG TCC GTG GTT CGC ACA GGT				
Gly Pro Gly Leu Gly Thr Asp Asp Ser Gly Arg Ser Val Val Arg Thr Gly				
3030	3040	3050	3060	3070
CGA GGA CTT AGA GTT GCA AAC GGC CAA GTC CAG ATC TTC AGC GGA AGA GGC				
Arg Gly Leu Arg Arg Val Ala Asn Gly Gln Val Gln Ile Phe Ser Gly Arg Gly				
3080	3090	3100	3110	3120
ACC GCC ATC GGC ACT GAT AGC AGC CTC ACT CTC AAC ATC CGG GCG CCC CTA				
Thr Ala Ile Gly Thr Asp Ser Ser Leu Thr Leu Asn Ile Arg Ala Pro Leu				

FIG. 7K

3130	3140	3150	3160	3170
CAA TTT TCT GGA CCC GCC TTG ACT GCT AGT TTG CAA GGC AGT GGT CCG ATT				
Gln Phe Ser Gly Pro Ala Leu Thr Ala Ser Leu Gln Gly Ser Gly Pro Ile				
3180	3190	3200	3210	3220
ACT TAC AAC AGC AAC AAT GGC ACT TTC GGT CTC TCT ATA GGC CCC GGA ATG				
Thr Tyr Asn Ser Asn <u>Asn Gly Thr</u> Phe Gly Leu Ser Ile Gly Pro Gly Met				
3230	3240	3250	3260	3270
TGG GTA GAC CAA AAC AGA CTT CAG GTA AAC CCA GGC GCT TTA GTC TTC				
Trp Val Asp Gln Asn Arg Leu Gln Val Asn Pro Gly Ala Gly Leu Val Phe				
3280	3290	3300	3310	3320
CAA GGA AAC AAC CTT GTC CCA AAC CTT GCG GAT CCG GCT ATT TCC GAC				
Gln Gly Asn Asn Leu Val Pro Asn Leu Ala Asp Pro Leu Ala Ile Ser Asp				
3330	3340	3350	3360	3370
AGC AAA ATT AGT CTC AGT CTC GGT CCC GGC CTG ACC CAA GCT TCC AAC GCC				
Ser Lys Ile Ser Leu Ser Leu Gly Pro Gly Leu Thr Gln Ala Ser Asn Ala				
3380	3390	3400	3410	3420
CTG ACT TTA AGT TTA GGA AAC GGG CTT GAA TTC TCC AAT CAA GCC GTT GCT				
Leu Thr Leu Ser Leu Gly Asn Gly Leu Glu Phe Ser Asn Gln Ala Val Ala				

FIG. 7L

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3430          3440      3450      3460      3470      3480
ATA AAA GCG GGC CGG GGC TTA CGC TTT GAG TCT TCC TCA CAA GCT TTA GAG
Ile Lys Ala Gly Arg Gly Leu Arg Phe Glu Ser Ser Ser Gln Ala Leu Glu

          3490      3500      3510      3520      3530
AGC AGC CTC ACA GTC GGA AAT GGC TTA ACG CTT ACC GAT ACT GTG ATC CGC
Ser Ser Leu Thr Val Gly Asn Gly Leu Thr Leu Thr Asp Thr Val Ile Arg

          3540      3550      3560      3570      3580
CCC AAC CTA GGG GAC GGC CTA GAG GTC AGA GAC AAT AAA ATC ATT GTT AAG
Pro Asn Leu Gly Asp Gly Leu Glu Val Arg Asp Asn Lys Ile Ile Val Lys

          3590      3600      3610      3620      3630
CTG GGC GCG AAT CTT CGT TTT GAA AAC GGA GCC GTA ACC GCC GGC ACC GTT
Leu Gly Ala Asn Leu Arg Phe Glu Asn Gly Ala Val Thr Ala Gly Thr Val

          3640      3650      3660      3670      3680
AAC CCT TCT GCG CCC GAG GCA CCA CCA ACT CTC ACT GCA GAA CCA CCC CTC
Asn Pro Ser Ala Pro Glu Ala Pro Pro Thr Leu Thr Ala Glu Pro Pro Leu

          3690      3700      3710      3720      3730
CGA GCC TCC AAC TCC CAT CTT CAA CTG TCC CTA TCG GAG GGC TTG GTT GTG
Arg Ala Ser Asn Ser His Leu Gln Leu Ser Leu Ser Glu Gly Leu Val Val

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FIG. 7M

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3740      3750      3760      3770      3780
CAT AAC AAC GCC CTT GCT CTC CAA CTG GGA GAC GGC ATG GAA GTA AAT CAG
His Asn Asn Ala Leu Ala Leu Gln Leu Gly Asp Gly Met Glu Val Asn Gln

3790      3800      3810      3820      3830
CAC GGA CTT ACT TTA AGA GTA GGC TCG GGT TTG CAA ATG CGT GAC GGC ATT
His Gly Leu Thr Leu Arg Val Gly Ser Gly Leu Gln Met Arg Asp Gly Ile

3840      3850      3860      3870      3880
TTA ACA GTT ACA CCC AGC GGC ACT CCT ATT GAG CCC AGA CTG ACT GCC CCA
Leu Thr Val Thr Pro Ser Gly Thr Pro Ile Glu Pro Arg Leu Thr Ala Pro

3890      3900      3910      3920      3930
CTG ACT CAG ACA GAG AAT GGA ATC GGG CTC GCT CTC GGC GCC GGC TTG GAA
Leu Thr Gln Thr Glu Asn Gly Ile Gly Leu Ala Leu Gly Ala Gly Leu Glu

3940      3950      3960      3970      3980      3990
TTA GAC GAG AGC GCG CTC CAA GTA AAA GTT GGG CCC GGC ATG CGC CTG AAC
Leu Asp Glu Ser Ala Leu Gln Val Lys Val Gly Pro Gly Met Arg Leu Asn

4000      4010      4020      4030      4040
CCT GTA GAA AAG TAT GTA ACC CTG CTC CTG GGT CCT GGC CTT AGT TTT GGG
Pro Val Glu Lys Tyr Val Thr Leu Leu Leu Gly Pro Gly Leu Ser Phe Gly

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FIG. 7N



4050	CAG CCG GCC AAC AGG ACA AAT TAT GAT GTG CGC GTT TCT GTG GAG CCC CCC	4060	4070	4080	4090
	Gln Pro Ala <u>Asn Arg Thr</u> Asn Tyr Asp Val Arg Val Ser Val Glu Pro Pro				
4100	ATG GTT TTC GGA CAG CGT GGT CAG CTC ACA TTT TTA GTG GGT CAC GGA CTA	4110	4120	4130	4140
	Met Val Phe Gly Gln Arg Gly Gln Leu Thr Phe Leu Val Gly His Gly Leu				
4150	CAC ATT CAA AAT TCC AAA CTT CAG CTC AAT TTG GGA CAA GGC CTC AGA ACT	4160	4170	4180	4190
	His Ile Gln Asn Ser Lys Leu Gln Leu Asn Leu Gly Gln Gly Leu Arg Thr				
4200	GAC CCC GTC ACC AAC CAG CTG GAA GTG CCC CTC GGT CAA GGT TTG GAA ATT	4210	4220	4230	4240
	Asp Pro Val Thr Asn Gln Leu Glu Val Pro Leu Gly Gln Gly Leu Glu Ile				
4250	GCA GAC GAA TCC CAG GTT AGG GTT AAA TTG GGC GAT GGC CTG CAG TTT GAT	4260	4270	4280	4290
	Ala Asp Glu Ser Gln Val Arg Val Lys Leu Gly Asp Gly Leu Gln Phe Asp				
4300	TCA CAA GCT CGC ATC ACT ACC GCT CCT AAC ATG GTC ACT GAA ACT CTG TGG	4310	4320	4330	4340
	Ser Gln Ala Arg Ile Thr Thr Ala Pro Asn Met Val Thr Glu Thr Leu Trp				

FIG. 70

4350           4360           4370           4380           4390  
 ACC GGA ACA GGC AGT AAT GCT AAT GTT ACA TGG CGG GGC TAC ACT GCC CCC  
 Thr Gly Thr Gly Ser Asn Ala Asn Val Thr Trp Arg Gly Tyr Thr Ala Pro

4400           4410           4420           4430           4440  
 GGC AGC AAA CTC TTT TTG AGT CTC ACT CGG TTC AGC ACT GGT CTA GTT TTA  
 Gly Ser Lys Leu Phe Leu Ser Leu Thr Arg Phe Ser Thr Gly Leu Val Leu

4450           4460           4470           4480           4490           4500  
 GGA AAC ATG ACT ATT GAC AGC AAT GCA TCC TTT GGG CAA TAC ATT AAC GCG  
 Gly Asn Met Thr Ile Asp Ser Asn Ala Ser Phe Gly Gln Tyr Ile Asn Ala

4510           4520           4530           4540           4550  
 GGA CAC GAA CAG ATC GAA TGC TTT ATA TTG TTG GAC AAT CAG GGT AAC CTA  
 Gly His Glu Gln Ile Glu Cys Phe Ile Leu Leu Asp Asn Gln Gly Asn Leu

4560           4570           4580           4590           4600  
 AAA GAA GGA TCT AAC TTG CAA GGC ACT TGG GAA GTG AAG AAC AAC CCC TCT  
 Lys Glu Gly Ser Asn Leu Gln Gly Thr Trp Glu Val Lys Asn Asn Pro Ser

4610           4620           4630           4640           4650  
 GCT TCC AAA GCT GCT TTT TTG CCT TCC ACC GCC CTA TAC CCC ATC CTC AAC  
 Ala Ser Lys Ala Ala Phe Leu Pro Ser Thr Ala Leu Tyr Pro Ile Leu Asn

FIG. 7P

4660 4670 4680 4690 4700  
 GAA AGC CGA GGG AGT CTT CCT GGA AAA AAT CTT GTG GGC ATG CAA GCC ATA  
Glu Ser Arg Gly Ser Leu Pro Gly Lys Asn Leu Val Gly Met Gln Ala Ile

4710 4720 4730 4740 4750  
 CTG GGA GGC GGC ACT TGC ACT GTG ATA GCC ACC CTC AAT GGC AGA CGC  
 Leu Gly Gly Gly Thr Cys Thr Val Ile Ala Thr Leu Asn Gly Arg Arg

4760 4770 4780 4790 4800  
 AGC AAC AAC TAT CCC GCG GGC CAG TCC ATA ATT TTC GTG TGG CAA GAA TTC  
 Ser Asn Asn Tyr Pro Ala Gly Gln Ser Ile Ile Phe Val Trp Gln Glu Phe

4810 4820 4830 4840 4850  
 AAC ACC ATA GCC CGC CAA CCT CTG AAC CAC TCT ACA CTT ACT TTT TCT TAC  
 Asn Thr Ile Ala Arg Gln Pro Leu Asn His Ser Thr Leu Thr Phe Ser Tyr

4860 4870 4880 4890 4900  
 TGG ACT TA AAT AAG TTG GAA ATA AAG AGT TAA ACT GAA TGT TTA AGT GCA  
 Trp Thr

4910 4920 4930 4940 4950  
 ACA GAC TTT TAT TGG TTT TGG CTC ACA ACA AAT TAC AAC AGC ATA GAC AAG

4960 4970 4980 4990 5000  
 TCA TAC CGG TCA AAC AAC ACA GGC TCT CGA AAA CGG GCT AAC CGC TCC AAG

FIG. 7Q

```
5010      5020      5030      5040      5050      5060
AAT CTG TCA CGC AGA CGA GCA AGT CCT AAA TGT TTT TTC ACT CTC TTC GGG

5070      5080      5090      5100
GCC AAG TTC AGC ATG TAT CGG ATT TTC TGC TTA CAC CTT T
```

FIG. 7R

Ad2	MSKEIPTPYMWSYQPQMGLAAGAAQDYSTRINYMSAGPHMISRVNGIRAH	50
BAV3	LIKQPVVGTTTHV-----EMPRNEVLEQH	23
Ad2	RNRILLEQAAITTTTPRNNLNPRSWPAALVYQESPAPTTVVLPDQAQAEVQ	100
BAV3	LTSHGAQIAGGG-----AAGDYFKSPTSARTLIPLTASCL-----RPDG	62
Ad2	MTNSGAQLAGGFRHRVRSPPGQGITHLKIRGRGIQLNDESVSSSLGLRPDG	150
BAV3	VFQLGGGSRSSFNPLQTDFAFHALPSRPRHGGIGSRQFVEEFVPAVYLN	112
Ad2	TFQIGGAGRSSFTPRQAILTLQTSSSEPRSGGIGITLQFIEEFVPSVYFNP	200
BAV3	YSGPPDSYPDQFIRHYNVYSNSVSGYS	139
Ad2	FSGPPGHYPDQFIPNFDAVKDSADGYD	227

FIG. 8A

BAV3	M-----EPDGVHAEQQFILNQISCANTALQRQREELASLVMLHACKRGL	77
Ad5	MTDTLDLEMDGIITEQRL--ERRRAAAEQQRMNQELQDMVNLHQCKRGI	48
BAV3	FCPVKTYKLSLNASASEHSLHFEKSPSRFTLVNTHAGASVRVALHHQGAS	127
Ad5	FCLVKQAKVTYDSNTTGHRLSYKLPTKRQKLVMVGEKPITITQHSVETE	98
BAV3	GSIRCSCSHAECPLVLLKTLCAFNFLD	154
Ad5	GCIHSPCQGPEDLCTLIKTLCLGLKDLIPFN	128

FIG. 8B



BAV3	-	AKLGPGGLGTDDSGRSVVRTGRGLRVANGQVQIFSGRGTAIGTDSSLTLNI	- 392
Ad2	-	TKVAGAIGYDSSNNMEIKTGGGMRINNNL--LILDVDYPFDAQTKLRKL	- 284
BAV3	-	RAPLQFSGPALTASLQSGSPITYNSNNGTFGLSIGPGMWVDQNRQLQVNP	- 442
Ad2	-	-----GQGPLYINASHN-----LDINYN	- 302
BAV3	-	AGLVFQGNLVPNLADPLAISDSKISLSLGPGLTQASNALTLSLGNGLEF	- 492
Ad2	-	RGLYL-----FNASNNTKKLEVSIIKKSS-----GLNF	- 329
BAV3	-	SNQAVAIKAGRGLRFESSSQALESSLTVGNGLTLTDTVIRPNLGDGLEVR	- 542
Ad2	-	DNTAIAINAGKGLEFDNT-----	- 348
BAV3	-	DNKIIIVKLGANLRFENGAVTAGTVNPSAPEAPPTLTAEPPPLRASNSHLQL	- 592
Ad2	-	-----	- 348
BAV3	-	SLSEGLVVHNNALALQLGDGMEVNQHGLTLRVGSGLQMRDGILTVTPSGT	- 642
Ad2	-	-----SESPDIN--PIKTKIGSGID-----YNENGA	- 372
BAV3	-	PIEPRLTAPLTQTENGIGLALGAGLELDESALQVKVGPGMRLNPVEKYVT	- 692
Ad2	-	MIT-----KLGAGLSFDNSG-----	- 387

## FIG. 8C-2

BAV3	-	LLLGPGLSFGQPANRTNYDVRVSVEPPMVFGQRGQLTFLVGHGLHIQNSK	- 742
Ad2	-	-----AITIG-----NKNDCLKTLWTTPDPSP-----NCR	- 412
BAV3	-	LQLNLGQGLRTDPVTNQLEVPLGQGLEIADESQVRVKLGDGLQFDSQARI	- 792
Ad2	-	IHSD-----NDCKFTLVLT---KCGSQVLA	- 434
BAV3	-	TTAPNMVTETLWTGTGSNANVTWRGYTAPGSKLFLSLTRFSTGLVLGNMT	- 842
Ad2	-	TVAALAVSGDLSSMTGTVASVS-----IFLRFDQ--NGVLMENSS	- 472
BAV3	-	IDSNASFGQYINAGHEQIECFILLDNQGNLKEGSNLQGTWEVKNNPSASK	- 892
Ad2	-	LKKHY-----WNFRNGNS-----TNANPYTNA	- 494
BAV3	-	AAFLPSTALYPILNESRGSLPGKNLVGMQAILGGGGTCTVIA-TLNGRRS	- 941
Ad2	-	VGFMPNLLAYP---KTQSQTAKNNIVSQVYLHGDKTKPMILTITLNGTSE	- 541
BAV3	-	NNYPAGQSII---FVWQ-EFNTIARQPLNHSTLTFSYWT	- 976
Ad2	-	STETSEVSTYSMSFTWSWESGKYTTTETFATNSYTFSYIAQE	- 582

## FIG. 8C-3





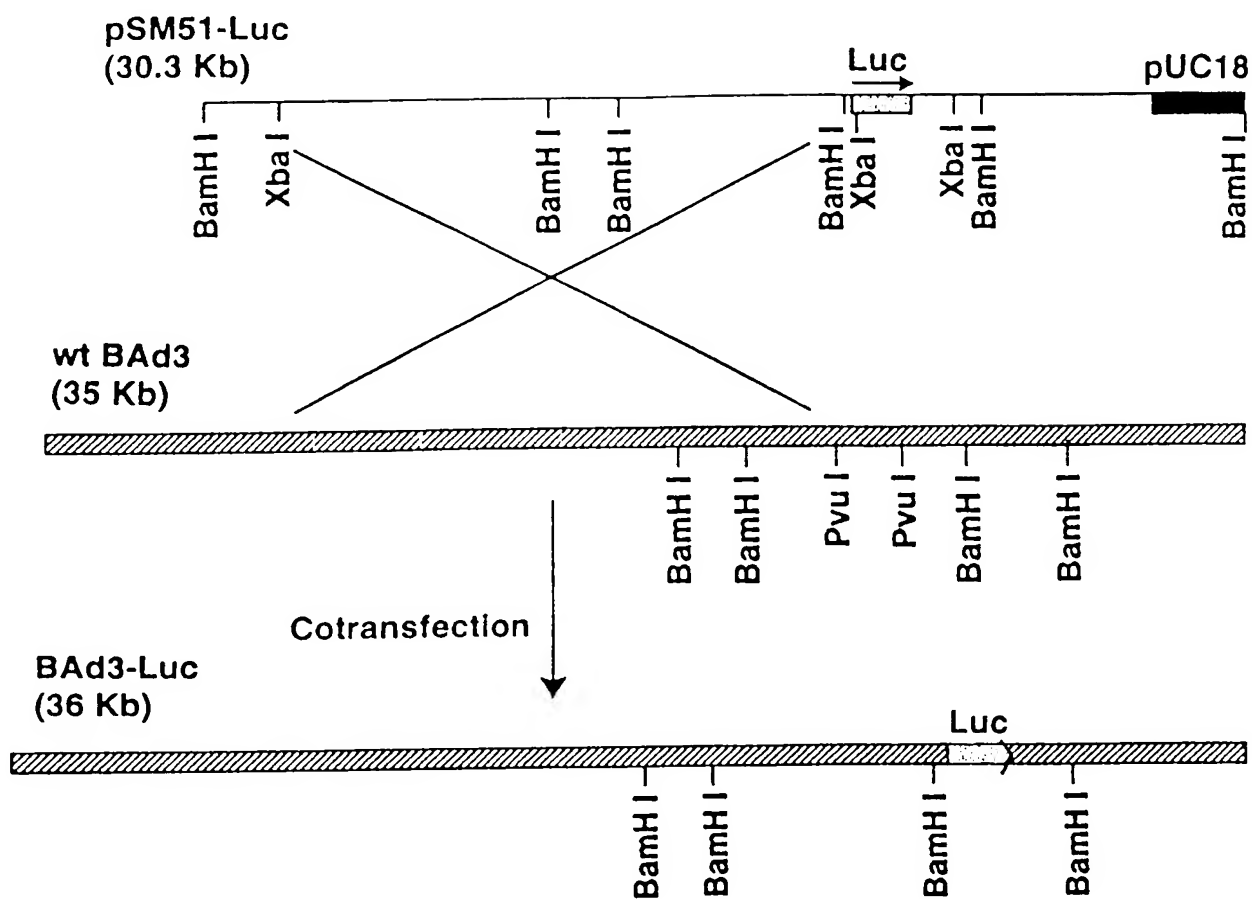
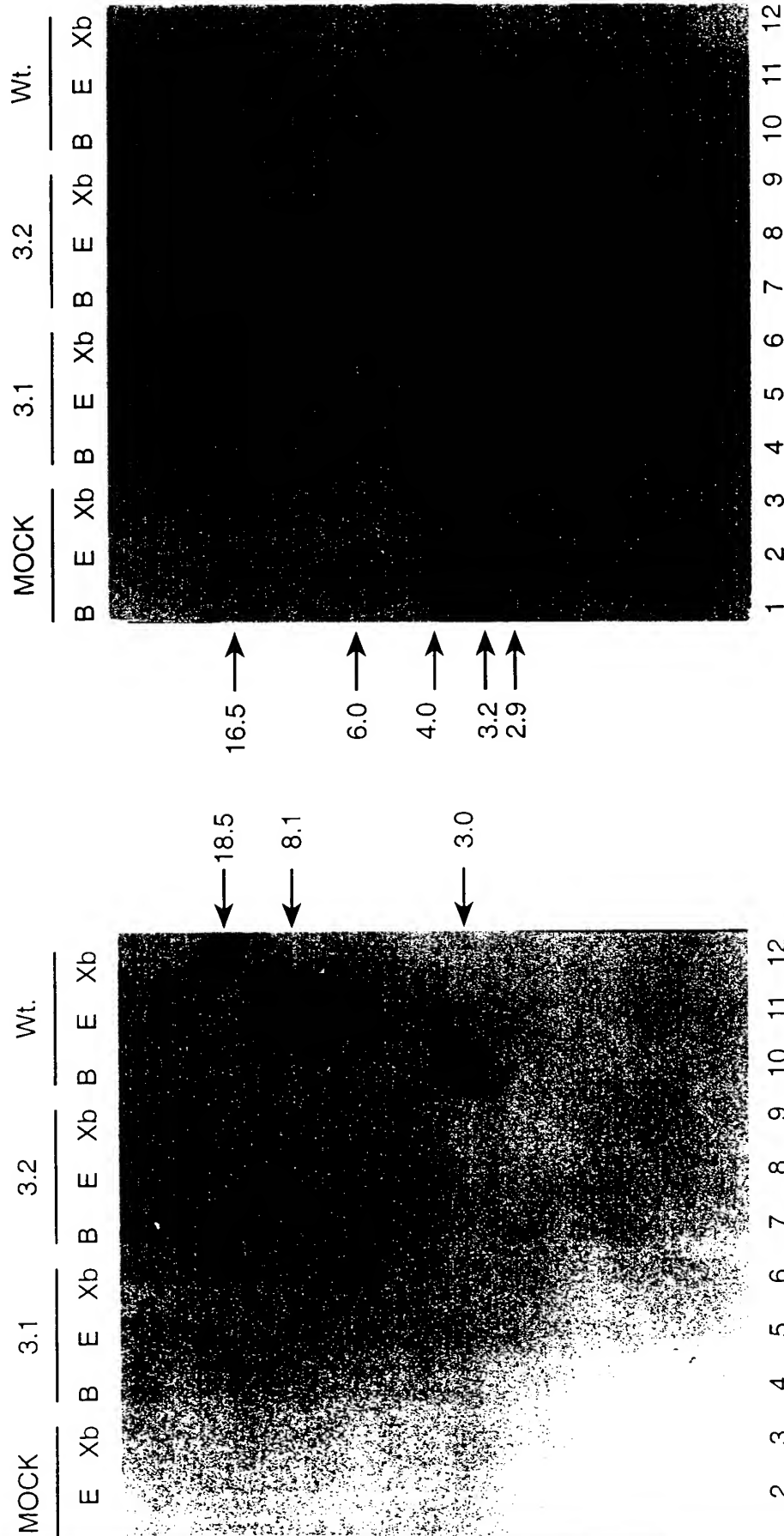


FIG. 10



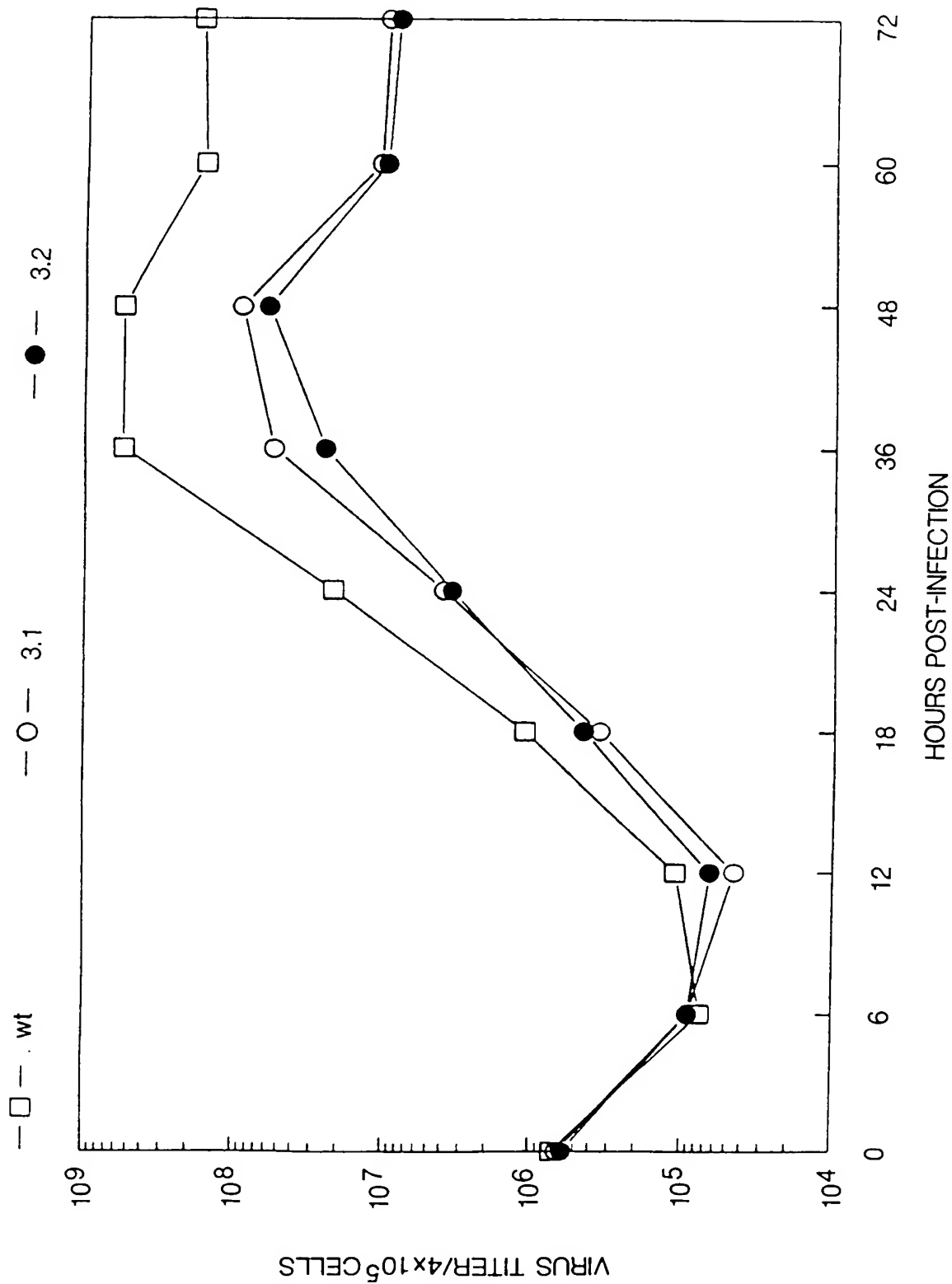


FIG. 12

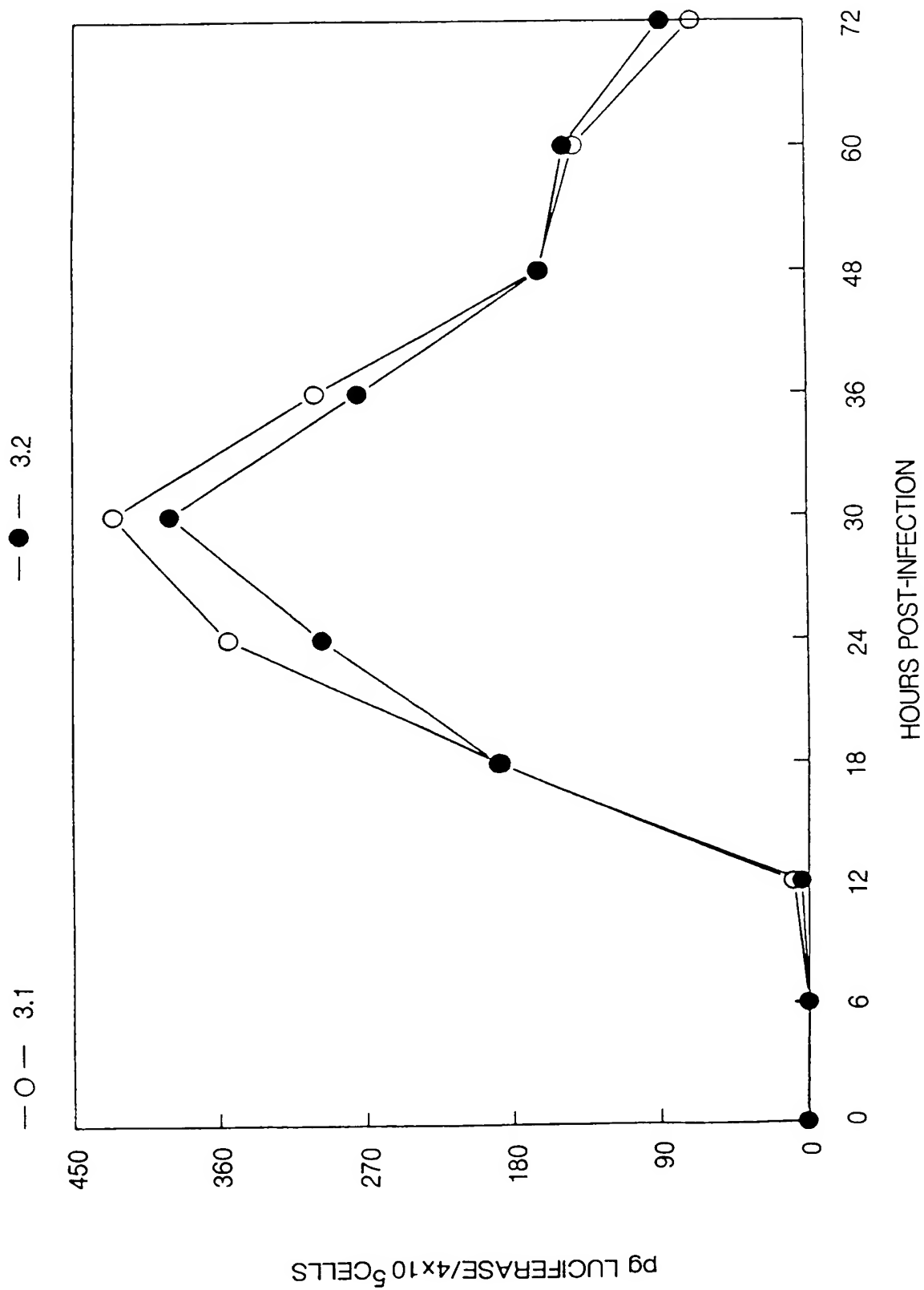


FIG. 13

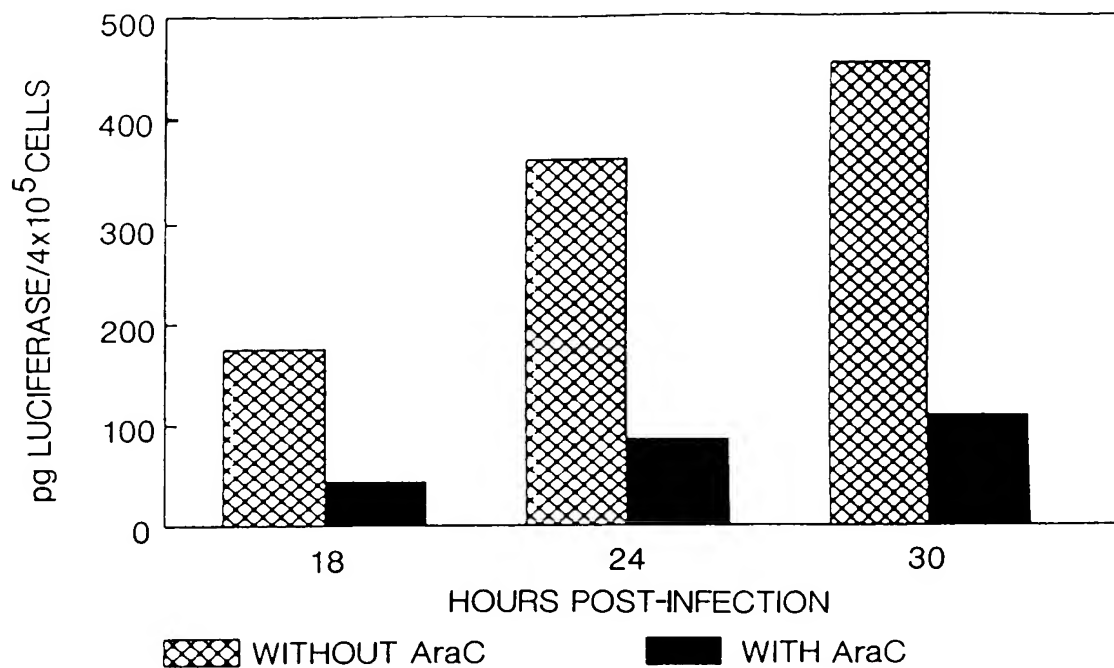


FIG. 14A

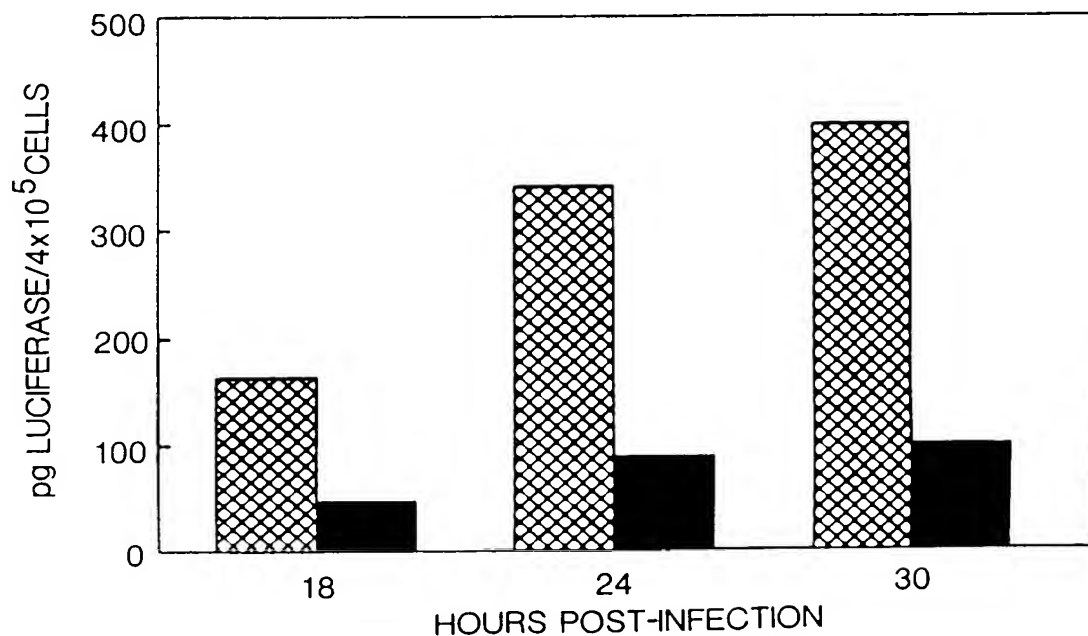


FIG. 14B

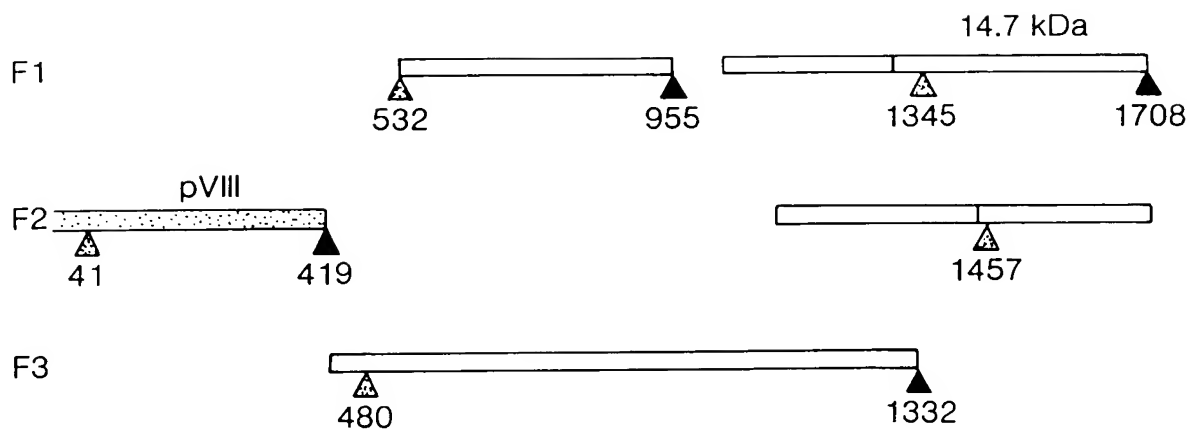
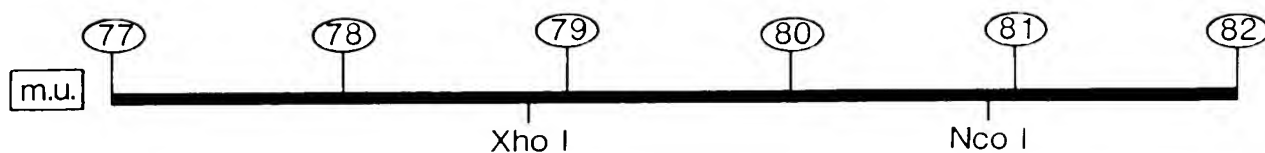


FIG. 15A

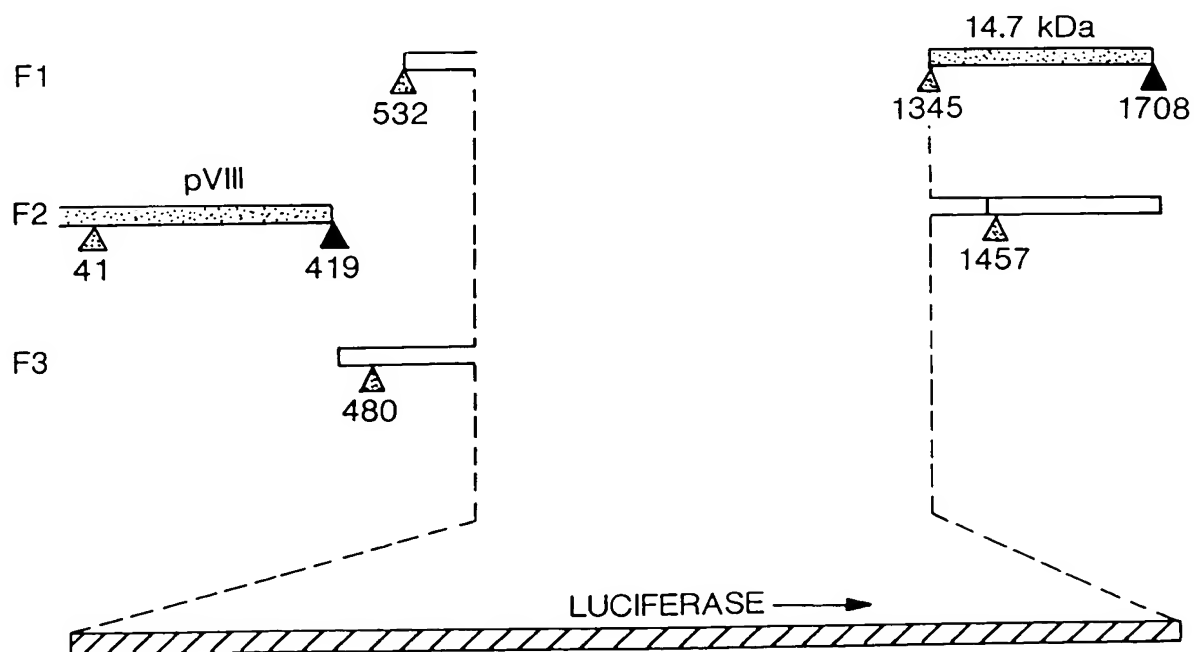
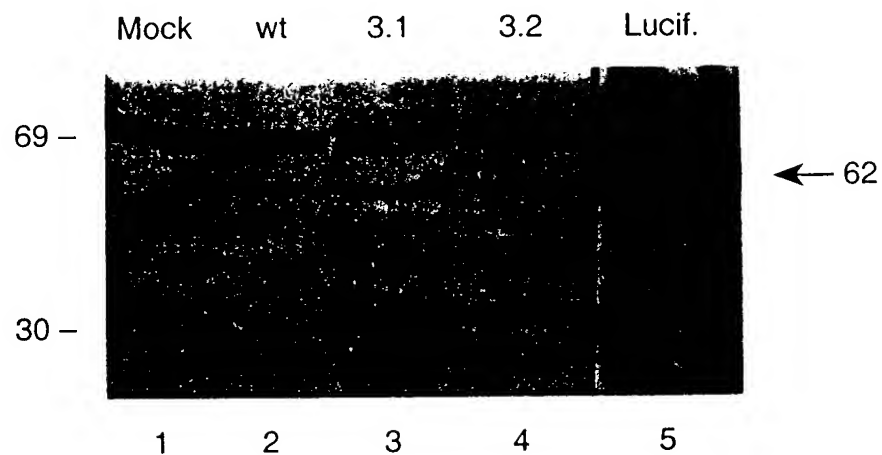


FIG. 15B



**FIG.\_16**

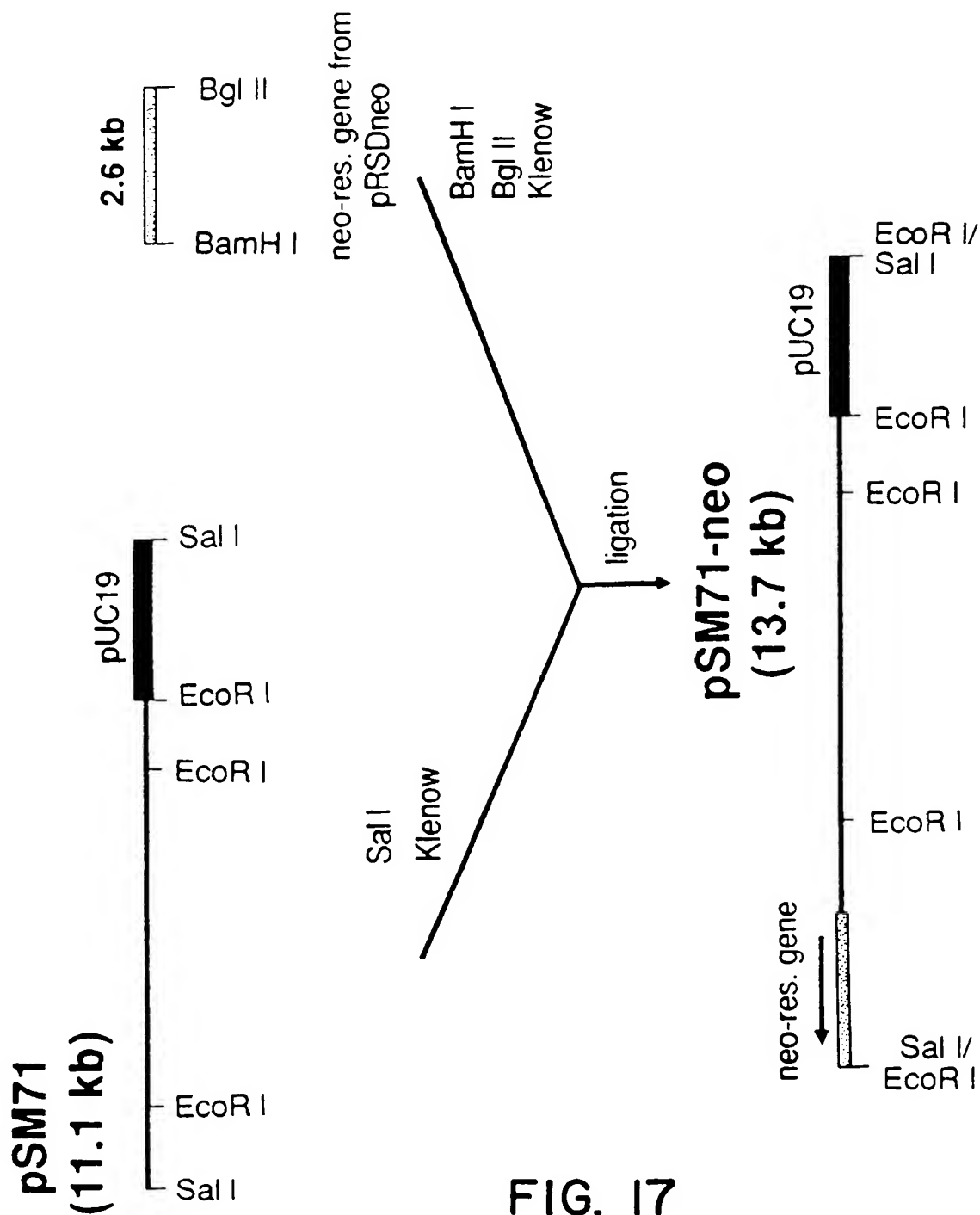


FIG. 17



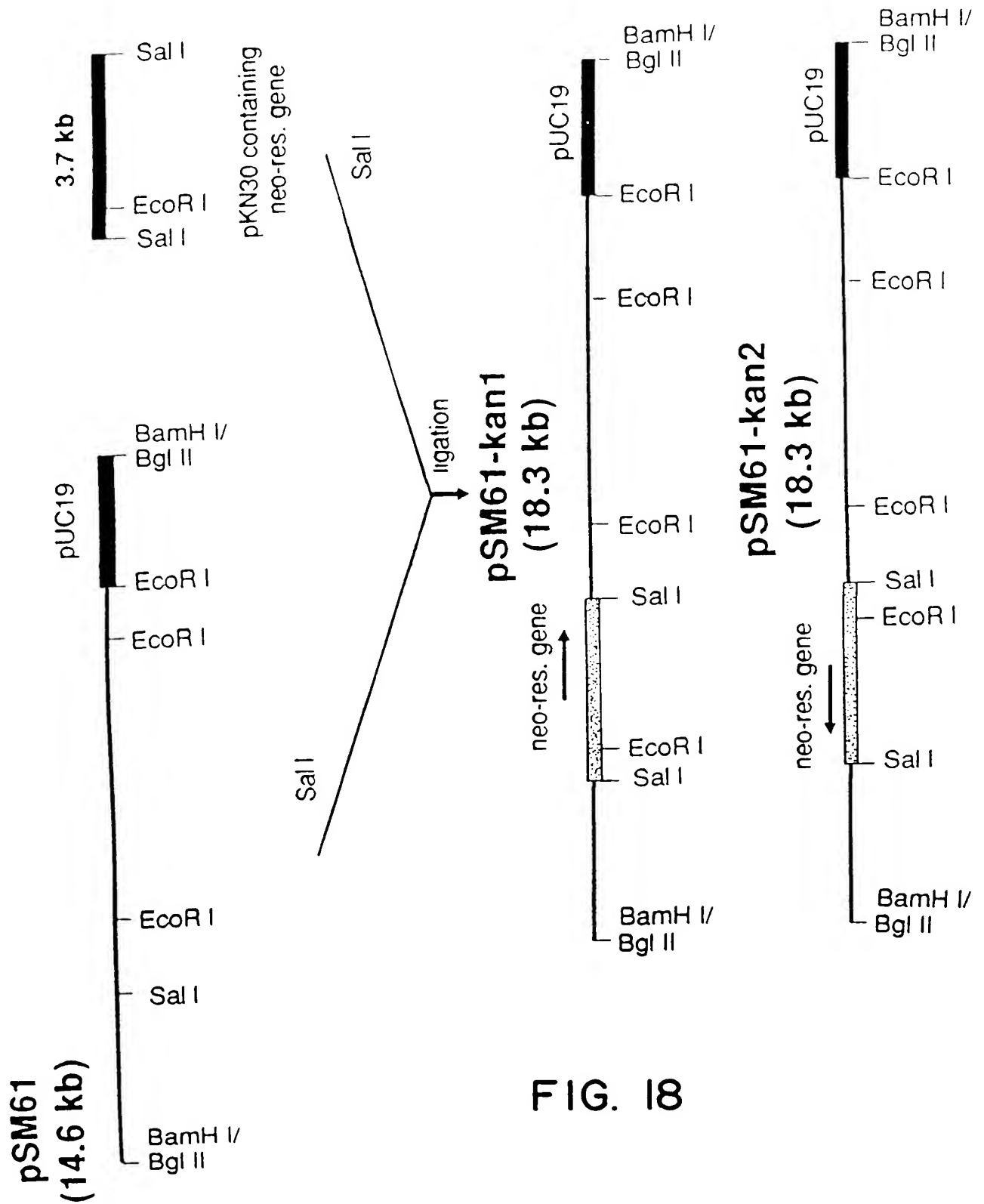


FIG. 18

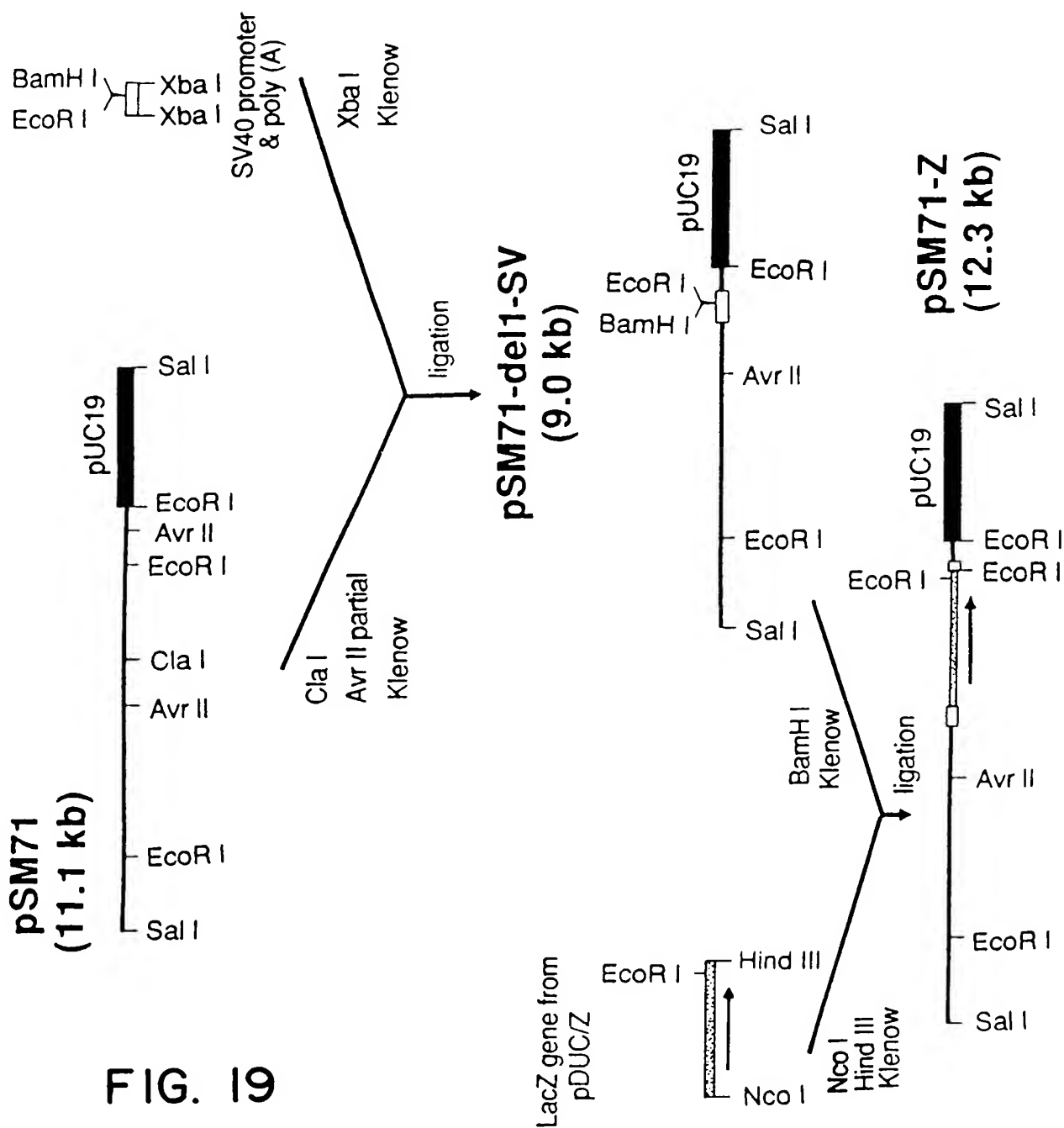


FIG. 19